Commonwealth of Kentucky
Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Permittee Name:	**PCI Incorporated**
Mailing Address:	**100 Wurts Road, Wurtland Kentucky 41144-1453**
Source Name:	**PCI Incorporated**
Mailing Address:	**Same as above**
Source Location:	**near Wurtland, Kentucky**
Permit Type:	**Federally-Enforceable**
Review Type:	**Title V, NSPS, Synthetic Minor**
Permit Number:	**V-99-010 (Revision 1)**
Log No. (Rev 1):	**G769 / 51548**
Application Complete Date:	**December 5, 2000**
Log Number:	**F800**
Application Complete Date:	**December 23, 1998**
KYEIS ID # :	**21-089-00032**
SIC Code:	**2865/Pigment Intermediate Manufacturers**
Region:	**Ashland**
County:	**Greenup**
Issuance Date:	**September 30, 1999**
Revision Date:	**April 3, 2001**
Expiration Date:	**September 30, 2004**

John E. Hornback, Director
Division for Air Quality

TABLE OF CONTENTS

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application which was determined to be complete on December 23, 1998, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in the Regulation 401 KAR 50:035, Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(1) UTILITIES - BOILERS:

EIS No.	PCI Vent ID	Indirect Heat Exchanger ID	Make/Model	Date of construction	Maximum Rated Capacity (Fuels used)
001	1	B-1	Boiler-Burnham Model No. 3P-500 450 hp	10/17/90	20.92 mmBTU/hr (Natural Gas) (Fuel Oil #2)
002	2	B-2	Boiler-Burnham Model No. 3P-500 450 hp	10/17/90	20.92 mmBTU/hr (Natural Gas) (Fuel Oil #2)
003	3	HO-1	Thermal Fluid Heater Model No. TJH-C-12.5	10/17/90	13.32 mmBTU/hr (Natural Gas) (Fuel Oil #2)
004	4	HO-2	Thermal Fluid Heater Model No. TJH-C-12.5	10/17/90	13.32 mmBTU/hr (Natural Gas) (Fuel Oil #2)
007*	5	WHB	Custom Build Noxidizer with Waste Heat Recovery	10/17/90	10.0 mmBTU/hr (Natural Gas) (ammonia)

*Only requirements for the Waste Heat Recovery system will be listed in this section.

APPLICABLE REGULATIONS:

Regulation 401 KAR 59:015 *New indirect heat exchangers constructed on or before April 9, 1972* applies to the particulate, sulfur dioxide and visible emissions.

Regulation 401 KAR 60:043 (40 CFR 60 Subpart Dc) *Standards of performance for small industrial-commercial-institutional steam generating units that commences construction, modification, or reconstruction after June 9, 1989* applies to the particulate and sulfur dioxide emissions. The source has elected to accept a limit on SO_2 emissions to preclude 401 KAR 51:017 *Prevention of significant deterioration of air quality.*

1. **Operating Limitations:** Pursuant to 40 CFR 60 Subpart Dc, Section 60.42c(h), no oil that contains greater than 0.5 weight percent sulfur shall be combusted.

   Compliance Demonstration Method: Records as specified by **5. Specific Recordkeeping Requirements.**

2. Emission Limitations:

a. Pursuant to Regulation 401 KAR 59:015 and 401 KAR 60:043
For natural gas combustion:
i. Emissions of particulate matter shall not exceed 0.345 lb/mmBTU.
ii. Emissions of sulfur dioxide shall not exceed 1.29lb/mmBTU.
iii. The opacity of visible emissions shall not exceed 20%.

b. For fuel oil #2 combustion:
i. Emissions of particulate matter shall not exceed 0.1 lb/mmBTU.
ii. The sulfur content of the fuel oils shall not exceed 0.5 percent by weight.
iii. The opacity of visible emissions shall not exceed 20% except
(a) Pursuant to Regulations 401 KAR 59:015, Section 4(2)(b), a maximum of 40% opacity is permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot.
(b) Pursuant to Regulations 401 KAR 59:015 Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
(c) Pursuant to Regulation 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Methods:

a. For sulfur content limits:
The permittee shall demonstrate compliance with the sulfur content limits through either: i. Fuel oil sampling - the oil in each fuel oil tank shall be sampled after each new shipment of oil is received as described in 40 CFR 60.46c (d)(2); or
ii. Fuel oil supplier certification - the permittee shall maintain fuel oil receipts as specified in 40 CFR 60.49b (r).

b. For the particulate matter standards:
Compliance with emission standards shall be demonstrated through each unit, burning only the fuels specified in this permit. The permittee shall keep records of the type(s) of fuel burned.

c. For visible emissions:
For each boiler, no compliance demonstration is necessary while natural gas and fuel oil #2 are the fuels burned except for each boiler the permittee shall maintain records of the occurrence and duration of each incident of fire box cleaning, soot blowing, fire building, startup, and shutdown.

3. Specific Testing Requirements:

a. The permittee shall demonstrate compliance with the sulfur dioxide emission limits for fuel oil #2 combustion through fuel supplier certification of the fuel sulfur content.
b. If fuel oil sampling is performed, the sampling shall be performed in accordance with the procedures described in 40 CFR 60.46c (d)(2).

4. Specific Monitoring Requirements:

The permittee shall monitor and maintain records of the following information:

a. The monthly (calender month) fuel usage rate (cubic feet/month or gallons per month) of each of the fuels (natural gas and fuel oils #6) listed previously for each boiler.
b. The sulfur content of each type of fuel oil burned.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. The maximum design heat input capacity of each of the boilers.
b. The sulfur content of fuel oil used. If fuel oil supplier certification is used to demonstrate compliance with the sulfur content limits, the records shall contain the following information:
   i. The name of the oil supplier.
   ii. A statement from the oil supplier certifying the sulfur content of the oil.
c. Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(g), the permittee shall record the combined amount of natural gas combusted in all boilers during each day.
d. Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(g), the permittee shall record the combined amount of fuel oil combusted in all boilers during each day.
e. Pursuant to 40 CFR 60 Subpart Dc, Section 60.48c(e), the permittee shall retain records of the quarterly reports required by Section 60.48c(d).
f. Pursuant to 40 CFR 60 Subpart A, Section 60.7(b), and Regulation 401 KAR 59:005, Section 3(2), the permittee shall record the occurrence and duration of any startup, shutdown, or malfunction in the operation of the indirect heat exchanger.

6. Specific Reporting Requirements:

Pursuant to 40 CFR 60 Subpart Dc, Sections 60.48c(d), (e)(11), and (f), the permittee shall submit quarterly reports to the Ashland Regional Office. Each quarterly report shall be postmarked by the 30th day following the end of the reporting period, and shall include the following information:

a. Fuel supplier certification, as described in Monitoring Condition 4(b); and
b. A statement signed by the owner or operator that the records of fuel supplier certification submitted represent all of the fuel oil combusted during the quarter.

7. Specific Control Equipment Operating Conditions: N/A

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(2) STORAGE TANKS

KY EIS	Tank ID	Capacity (gallons)	Type	Description	PCI Vent ID	Significant?
006	T-75	14,366	Vertical, Fixed Roof	Solvent Storage	5	Y
006	T-80	14,366	Vertical, Fixed Roof	Solvent Storage	5	Y
010 (1)	T-60	16,000	Vertical, Fixed Roof	50% Caustic	9	N
010 (3)	T-85	14,400	Vertical, Fixed Roof	Sulfuric acid	11	N
010 (2)	T-65	------	Vertical, Fixed Roof	Sodium Sulfhydrate	10	N
009	T-45	6,000	Vertical, Fixed Roof	Wastewater Col	8	N
009	T-50	20,000	Vertical, Fixed Roof	ww equalization	8	N
009	T-55	20,000	Vertical, Fixed Roof	ww equalization	8	N
009	T-56	30,000	Vertical, Fixed Roof	ww collection	8	N
009	T-58	7,000	Vertical, Fixed Roof	sludge collection	8	N
009	T-61	4,000	Vertical, Fixed Roof	ww contact	8	N
009	T-70	17,300	Vertical, Fixed Roof	ww backwash	8	N
009	T-71	30,000	Vertical, Fixed Roof	ww backwash	8	N
006	T-72	13,000	Vertical, Fixed Roof	ww collection/stripper	5	N
009	T-73	----	Vertical, Fixed Roof	ww collection	8	N
009	T-21	7,000	Vertical, Fixed Roof	Sludge Tank	8	N

APPLICABLE REGULATIONS:

Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984* applies to T-75 and T-80.

Regulation 401 KAR 59:485 (40 CFR 60 Subpart Kb) does not apply to any wastewater, caustic or acid tanks as they are not in VOC service.

Regulation 401 KAR 63:021 *Existing sources emitting toxic air pollutants* applies to T-75 and T-80.

Regulation 401 KAR 59:050 *New storage vessels for petroleum liquids* does not apply as no petroleum liquid is being stored on-site.

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**
   a. Pursuant to 40 CFR 60.116b (b), for each of the tanks listed above that is subject to 40 CFR 60 Subpart Kb. The permittee shall keep readily accessible records showing the dimensions of the tank and an analysis showing the capacity of the tank. The records shall be kept for the life of the tank.

   (State Origin Requirement)
   b. Pursuant to 401KAR 63:021, the permittee shall maintain a weekly log of presence of a water head on tanks T-75 and T-80.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions: (State Origin Requirement)**
   Pursuant to 401KAR 63:021, T-75 and T-80 shall be maintained under a water head when solvent is being stored.

   Compliance Demonstration Method: Permittee shall maintain records of periods when solvent is being stored. Weekly records shall be kept of the water head depth.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(3) PRODUCTION:

KY EIS	PCI ID	Description	PCI Vent ID
005 (1)	(R-1 thru 6)	6 - 4,000 gallon Glass Lined Reactors	5
005 (1)	(RFC-1 thru 6)	6 - 500 ft^2 Reactor Reflux Condensers	5
005 (1)	(T-1 thru 6)	6 - 500 gallon Condenser Decanter Tanks	5
005 (1)	(T-10)	1 - 4,000 gallon MixTank	5
005 (4)	(T-20)	1 - 5,000 gallon Dump Tank	5
005 (1)	(RVD-1 thru 6)	6 - 330 ft^3 Rotary Vacuum Dryers	5
005 (1)	(VC-1 thru 6)	6 - 500 ft^2 Vacuum Dryer Condensers	5
005 (1)	(VR-1 thru 6)	6 - 4,000 gallon Vacuum Receiver Tanks	5
005 (1)	(P-1)	1 -150 hp Vacuum Pump	5
005 (1)	(P-2)	1 - 200 hp Vacuum Pumps	5
005 (1)	(VC-7)	1 - 500 ft^2 Gas Cooler	5
005 (1)	(VR-7)	1 - 2,000 gallon Moisture Receiver	5
005 (3)	(PT-1 thru 3)	3 - 20,000 gallon Purification Tanks	5
005 (3)	(FP-1 thru 3)	3 - Horizontal Chamber Plate Filter Presses	5
005 (3)	(ST-1 thru 3)	3 - 4,500 gallon Reslurry Tanks	5
005 (3)	(T-30)	1 - 7,500 gallon Product Slurry Hold Tank	5
005 (2)	(FD-1 thru 2)	2 - Wet Cake Semicontinuous Rotary Dryers	5
005 (3)	(RB-1 thru 2)	2 - 500 ft^3 Ribbon Blenders	5
005 (2)	(PO-1)	1 - Product Pack-out Station	5
005 (3)	(VP-1 thru 2)	2 - Vertical Belt Filter Press	5
005 (3)	(VPH-1 thru 2)	2 - Vertical Belt Filter Press Hydraulic Tank	5
005 (1)	(T-35)	1 - Knock-out Tank	5
005 (3)		Associated pipeline equipment	5

Control Equipment
Dual Bed Carbon Adsorption System
Ammonia Thermal Oxidation System
Pulse Jet Fabric Filters

APPLICABLE REGULATIONS:

Regulation 401 KAR 63:021 *Existing sources emitting toxic air pollutants.*
401 KAR 59:010 *New Process Operations* constructed after July 2, 1975.
Exemption - The reactors listed above are exempt from Regulation 401 KAR 60:700 and 401 60:480 since they are part of a process unit that does not produce any of the chemicals listed under those regulations.
Exemption - The tanks listed above are exempt from 401 KAR 59:485. *Standards of performance for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984* as no volatile organic liquids are being stored.

1. Operating Limitations:

a. Pursuant to 401 KAR 63:021 and Agreed Order #DAQ-17972-114, production rate of Copper Phthalocyanine Crude Blue shall not exceed 8,000 tons/year for any consecutive twelve months.
b. The thermal oxidation system shall only be used for the combustion of gaseous waste streams emanating from the process equipment. The thermal oxidation system shall not be used for the combustion of any liquid waste streams.
c. In the case of a malfunction of the reflux condenser system, the carbon adsorption system, or the ammonia thermal oxidation system, the vapor flow from the process shall be as rapidly as possible in a manner to be protective of human health and safety, locked within the process vessel. In the case of a malfunction of the reflux condenser system, the carbon adsorption system, or the ammonia thermal oxidation system, the heat supply to the vessel shall be shut off and the process shall be shutdown as rapidly as possible in a manner to be protective of human health and safety.
d. The permittee shall maintain the following spare parts in stock:
    i. Cooling water circulation pump.
    ii. Cooling tower packing.
    iii. Process blower for the carbon adsorption system.
    iv. Pulse jet dust collector filter bags and cages.

2. Emission Limitations:

a. Mass Emission Limit Pursuant to Regulation 401 KAR 59:010 Section 3(2) particulate matter emissions shall not exceed: $3.59 \times (\text{Tons Processed})^{0.62}$ lbs/hr for (Tons processed) less than 30 tons per hour, otherwise: $17.31 \times (\text{Tons Processed})^{0.16}$ lbs/hr, averaged over a period that covers a complete operation of the batch process.
b. Opacity Limit Pursuant to Regulation 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis.

***Compliance Demonstration Method*:**

a. During periods of normal operation of the fabric filter, no compliance demonstration is necessary.
b. The pulse jet dust collectors shall be equipped with a particulate detector which will automatically shut down the dust collector blower and wet cake dryer in case of particulate pass-through.

3. **Testing Requirements:** PCI shall conduct performance testing at least twice during the duration of the permit, once in first 24 months after the final permit is issued and once at least 18 months before permit renewal as required by 401 KAR 50:035. PCI shall conduct performance tests on the carbon adsorber, ammonia thermal oxidation system. The required tests are as follows:

a. Carbon adsorber removal efficiency as measured by HCl emissions from the thermal oxidation system.
b. Total VOC emission rate.
c. Ammonia thermal oxidation system's NO_x emission rate.
d. PCB emission rate.
e. Dioxin/Furan emission rate.

4. **Specific Monitoring Requirements:**

The permittee shall maintain, calibrate and operate according to manufacturers' specification, a monitoring device for the continuous measurement of each of the following:

a. The reactor temperature during the reaction cycle.
b. The inlet and outlet temperatures of the adsorption system.
c. The pressure drop across the carbon adsorption system.
d. The first stage combustion temperature of the ammonia thermal oxidation system.
e. The O_2 outlet concentration of the ammonia thermal oxidation system.
f. The HCl outlet concentration of the ammonia thermal oxidation system.
g. The volumetric flow rate leaving the ammonia thermal oxidation system.
h. The pressure drop across the pulse jet dust collectors.
i. The inlet gas temperatures to the pulse jet dust collectors.

5. **Specific Recordkeeping Requirements:**

The permittee shall maintain records of the following information:

a. Monthly production records.
b. Monthly hours of operation.
c. Continuous records (on electronic data acquisition system with a minimum recording frequency of four data points or averages per hour, strip chart recorder or equivalent) of the parameters listed in **4. Specific Monitoring Requirements** a through i.
d. All maintenance activities performed on the Dual Bed Carbon Adsorption System, Ammonia Thermal Oxidation System and Pulse Jet Fabric Filters.
e. HCl concentration shall be recorded also as HCl mass flow rate in lb/hr, taking into account the stack gas temperature, actual flow rate and moisture content.
f Replacement and restocking of the spare parts listed in **Operating Limitations**, Requirement d.
g. Any shutdowns of the dust collector blower and wet cake dryer because of particulate pass-through.

6. **Specific Reporting Requirements:** None

7. Specific Control Equipment Operating Conditions:

a. Dual Bed Carbon Adsorption System shall reduce hydrocarbons by at least 97% between inlet and outlet based on a three-hour compliance average.

Compliance demonstration

i. The ammonia thermal oxidation system shall be operated as in 7.c. below.

ii. HCl mass flow rates shall be less than 2.9 hour on a three-hour basis.

b. The pulse jet dust collectors shall be equipped with a particulate detector which will automatically shut down the dust collector blower and wet cake dryer in case of particulate pass-through.

c. The ammonia thermal oxidation system shall operate at a first-stage combustion temperature of 2100^{o} F ± 110^{o}F. An excursion is any 3-hour period during which the average temperature was outside of this range.

d. The O_2 outlet concentration of the ammonia thermal oxidation system shall be greater than 4%. An excursion is any 3-hour period during which the average temperature was outside of this range.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(4) WASTEWATER PRETREATMENT PROCESS:

KY EIS	PCI ID	Description	PCI Vent ID
009 (2)	(T-45)	1 -6,000 gallon Wastewater Collection Tank	8
009 (2)	(T-50 & 55)	2 -20,000 gallon Equalization Tanks	8
009 (2)	(T-71)	1 -30,000 gallon wastewater (dirty) backwash tank	8
009 (2)	(T-70)	1 -17,300 gallon wastewater (clean) backwash tank	8
	(CAW-1 & 2)	2 -20,000 gallon carbon adsorption pressure tanks	
	(M-1, 2 & 5)	3 -275 gallon Flocculant Tank	
009 (1)	(T-90B & 90C)	1 -2,000 gallon Flocculant Tank/Clarifier	5
	(M-4)	1 -275 gallon Precipitant Tank	
009 (1)	(T-90A)	1 -200 gallon Rapid Mix Tank	5
009 (1)	(T-91)	1 -Clarifier	5
005 (3)	(FP-4)	1 -Product Slurry Recovery Press	5
009 (1)	(T-95)	1 -Sand Filter	5
009(1)	(T-20)	1 -7,000 gallon Surge Tank	5
009 (2)	(T-21)	1 -7,000 gallon Sludge Tank	8
006 (1)	(T-72)	1 -13,000 gallon Wastewater Collection/Stripper Tank	5
009 (1)	(T-57A & 57B)	1 - Rapid Mix Tank and Flocculator	5
009 (1)	(T-97)	1 - Sand Filter Clear Well	5
009 (1)	(T-96)	1 - 300 gallon Wastewater Collection tank	5
	(M-3 & 7)	2 - Caustic Day Tank	
009 (2)	(T-73)	1 - Wastewater Collection Tank	8

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:021 *Existing sources emitting toxic air pollutants* applies to Ammonia emission.

1. **Operating Limitations:** None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** Ammonia emissions from the Wastewater collection/Stripper Tank (T-72) shall be vented to the waste heat boiler.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(5) Urea Bulk Handling System

KY EIS	PCI ID	Description	Insignificant	PCI Vent ID
008 (1&2)	BH-4	Urea Bulk Handling	No	6 &7

Control Equipment
(2) Fabric Filters

APPLICABLE REGULATIONS:
401 KAR 59:010 *New Process Operations* constructed after July 2, 1975.

1. Operating Limitations: None

2. Emission Limitations:

a. Mass Emission Limit Pursuant to Regulation 401 KAR 59:010 Section 3(2) particulate matter emissions shall not exceed: 3.59 x (Tons Processed)$^{0.62}$ lbs/hr for (Tons processed) less than 30 tons per hour, otherwise: 17.31 x (Tons Processed)$^{0.16}$ lbs/hr, averaged over the batch process time.

b. Opacity Limit Pursuant to Regulation 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis.

***Compliance Demonstration Method*:**

a. During periods of normal operation of the fabric filter, no compliance demonstration is necessary.

b. If any of the emission units associated with a fabric filer are in operation during any period of a malfunction of the fabric filter, the permittee shall determine compliance through maintenance of the records required by Item d. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall perform a weekly visual inspection of the fabric filter system.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly throughput through the system.
b. Monthly hours of operation.
c. Weekly log of visual inspections of the fabric filter.
d. During all periods of malfunction of any of the fabric filters if any of the emission units associated with each station are in operation, a daily (calendar day) log of the following information shall be kept:
   i. Whether any air emissions were visible.

   If visible emissions are observed, the permittee shall record the following information:
   ii. Whether the visible emissions were normal for the process.
   iii. The color of the emissions and whether the emissions were light or heavy.
   iv. The cause of the abnormal visible emissions.
   v. Any corrective actions taken.
e. All routine and nonroutine maintenance activities performed on the fabric filters.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

(6) SULFONATED BLUE PROCESS (New Construction)

KY EIS	PCI ID	Description	Insignificant	PCI Vent ID
011 (1)	DS-101	Dump Station	No	(-)
011 (1)	DS-101	CPC Dump Station	No	E020
011 (1)	FP-101	Filter Press	Yes	(-)
011 (1)	R-101	Sulfonation Reactor	Yes	E021
011 (1)	SC-101	Conveyor	Yes	E020
011 (1)	T-101	Quench tank	Yes	E021
011 (1)	T-102	ML Storage Tank	Yes	E021
011 (1)	T-110	Oleum Storage Tank	Yes	E021

Control Equipment
Sulfuric Acid Scrubber
Dump Station Fabric Filter

APPLICABLE REGULATIONS:

401 KAR 59:010 *New Process Operations* constructed after July 2, 1975.

Exemption - The reactors listed above are exempt from Regulation 401 KAR 60:700 since they are part of a process unit that does not produce any of the chemicals listed under 40 CFR 60.707 and process is performed as a batch operation.

Exemption - The tanks listed above are exempt from 401 KAR 59:485. *Standards of performance for volatile organic liquid storage vessels (including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984* as no volatile organic liquids are being stored.

1. Operating Limitations: None

2. Emission Limitations:

a. Pursuant to Regulation 401 KAR 59:010 particulate matter emissions shall not exceed 3.59 (Tons Processed)$^{0.62}$ lbs/hr, averaged over a period that covers a complete operation of the batch process.

b. Opacity Limit Pursuant to Regulation 401 KAR 59:010, Section 3(1)(a), visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis.

***Compliance Demonstration Method*:**

a. During normal operation of the fabric filter no compliance demonstration is necessary.

b. If the dump station is in operation during any period of malfunction of the fabric filter, the permittee shall determine compliance through maintenance of the records required by Item e. under **5. Specific Recordkeeping Requirements below**.

3. Testing Requirements: None

4. Specific Monitoring Requirements: The permittee shall perform a weekly visual inspection of the fabric filter system.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following information:

a. Monthly throughput through the dump stations.

b. Monthly hours of operation.

c. Weekly log of visual inspections of the fabric filter.

d. During all periods of malfunction of any of the fabric filters if any of the emission units associated with each station are in operation, a daily (calendar day) log of the following information shall be kept:

i. Whether any air emissions were visible.

If visible emissions are observed, the permittee shall record the following information:

ii. Whether the visible emissions were normal for the process.

iii. The color of the emissions and whether the emissions were light or heavy.

iv. The cause of the abnormal visible emissions.

v. Any corrective actions taken.

e. All routine and nonroutine maintenance activities performed on the fabric filters.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 50:035, Section 5(4). While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

	Description	Generally Applicable Regulation
1.	Process Pipeline Equipment	None
2.	Tank Truck Transfer Station	None
3.	Water Tanks (T-103, 104, & 105)	None
4.	Ice Bin (TB-101)	None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. In order to preclude the applicability of Regulation 401 KAR 51:017, total emission of Volatile Organic Compounds from the original source construction (Emission areas 1, 2, 3 and 4) shall not exceed 90 tons per year based on a twelve (12) month rolling total. Compliance shall be demonstrated through compliance with the production limitation contained in Agreed Order #DAQ-17972-114 and through operation of the Carbon Bed adsorber and Ammonia Thermal oxidizer as described in **Section B (3) PRODUCTION**.

2. In order to preclude the applicability of Regulation 401 KAR 51:017, total emission of Sulfur Dioxide from the original source construction (Emission areas 1 and 3) shall not exceed 90 tons per year based on a twelve (12) month rolling total. Compliance shall be demonstrated through maintaining records of fuels combusted and Sulfur content of any fuel oil combusted.
3. In order to preclude the applicability of Regulation 401 KAR 51:017, total emission of Nitrogen Oxides and Carbon Monoxide from the original source construction (Emission areas 1 and 3) shall not exceed 90 tons per year based on a twelve (12) month rolling total. Compliance shall be demonstrates through maintaining records of fuels combusted and in proper maintainence and operation of the Ammonia Thermal Oxidizer as described in as described in **Section B - (3) PRODUCTION**..

4. The particulate, sulfur dioxide, nitrogen dioxide, opacity, carbon monoxide, and VOC emissions limitations specified herein shall be as measured by Reference Method 5, 6, 7, 9, 10, and 25, respectively, as specified in Regulation 401 KAR 50:015, Section 1 shall not exceed the respective limitations specified herein. An alternative method may be approved for measuring emissions may be used upon satisfactory demonstration to the Division for Air Quality that the alternative method will provide equivalent or better results.

5. Compliance with annual emissions and processing limitations imposed pursuant to 401 KAR 50:035, Section 7(1)(a), and contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

6. To implement any new monitoring, recordkeeping, and reporting requirements included herein, the Division hereby authorizes a one hundred twenty (120) day schedule, beginning with issuance of the final permit, for the following emission units:

01 Boiler-Burnham
02 Boiler-Burnham
03 Thermal Fluid Heater
04 Thermal Fluid Heater
05 Custom Build Noxidizer with Waste Heat Recovery
05 CPC Blue Production Equipment
08 Tank-75
09 Tank-80

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. The permittee shall submit to the division any changes to the Standard Operating Procedures manual which documents the changes in operating procedures and/or maintenance techniques used to maintain the equipment in good operating condition.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. When continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements.
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement;

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality. [401 KAR 50:035, Permits, Section 7(1)(d)2 and 401 KAR 50:035, Permits, Section 7(2)(c)]

3. In accordance with the requirements of Regulation 401 KAR 50:035, Permits, Section 7(2)(c) the permittee shall allow the Cabinet or authorized representatives to perform the following:
   a. Enter upon the premises where a source is located or emissions-related activity is conducted, or where records are kept;
   b. Have access to and copy, at reasonable times, any records required by the permit:
      i. During normal office hours, and
      ii. During periods of emergency when prompt access to records is essential to proper assessment by the Cabinet;
   c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency; and
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements. Reasonable times shall include, but are not limited to the following:
      i. During all hours of operation at the source,
      ii. For all sources operated intermittently, during all hours of operation at the source and the hours between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding holidays, and
      iii. During an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be reported to the division's Ashland Regional Office at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation.

   The reports are due within 30 days after the end of each six-month reporting period that commences on the initial issuance date of this permit. The permittee may shift to semi-annual reporting on a calendar year basis upon approval of the regional office. If calendar year reporting is approved, the semi-annual reports are due January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to Section 6(1) of 401 KAR 50:035, Permits. All deviations from permit requirements shall be clearly identified in the reports.

6. a. In accordance with the provisions of Regulation 401 KAR 50:055, Section 1 the owner or operator shall notify the Division for Air Quality's Ashland Regional Office concerning startups, shutdowns, or malfunctions as follows:
      1. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
      2. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

   b. In accordance with the provisions of Regulation 401 KAR 50:035, Section 7(1)(e)2, the owner or operator shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by general condition 6 a. above) to the Division for Air Quality's Ashland Regional Office. Prompt reporting shall be defined as :
      i. For short-term (less than 3 hours durations) excursions from, or failure to record the parameters used to monitor the performance of control devices (pulse jet fabric filters, waste gas temperature, carbon bed pressure drop, etc), the permittee shall include a summary of the excursions in the bi-annual reporting required by Condition F.5. above.
      ii. For longer periods of excursion(s) or inability to record monitoring parameters, the permittee shall contact the Ashland Regional office within 72 hours (excluding weekends and holidays).

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

iii. In the event that the permittee is unable to fulfill a requirement (such as a performance test, compliance certification submittal) within the timeframe specified herein, the permittee shall contact the Ashland Regional Office and the Frankfort Central office within 72 hours of expiration of the relevant timeframe. Extensions of the timeframes specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

7. Pursuant to Regulation 401 KAR 50:035, Permits, Section 7(2)(b), the permittee shall certify compliance with the terms and conditions contained in this permit, annually on the permit issuance anniversary date by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Division for Air Quality's Ashland Regional Office and the U.S. EPA in accordance with the following requirements:
   a. Identification of each term or condition of the permit that is the basis of the certification;
   b. The compliance status regarding each term or condition of the permit;
   c. Whether compliance was continuous or intermittent; and
   d. The method used for determining the compliance status for the source, currently and over the reporting period, pursuant to 401 KAR 50:035, Section 7(1)(c),(d), and (e).
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
   g. The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date, or by January 30th of each year if calendar year reporting is approved by the regional office. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Ashland Regional Office
3700 13th Street
Ashland, KY 41104-1507

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

8. In accordance with Regulation 401 KAR 50:035, Section 23, the permittee shall provide the division with all information necessary to determine its subject emissions within thirty (30) days of the date the KEIS emission report is mailed to the permittee.

9. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced by Regulation 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL CONDITIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. A noncompliance shall be (a) violation(s) of state regulation 401 KAR 50:035, Permits, Section 7(3)(d) and for federally enforceable permits is also a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition.

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to Regulation 401 KAR 50:035, Section 12(2)(c);
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA [(for Federal permits) determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish to the division, in writing, information that the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. [401 KAR 50:035, Permits, Section 7(2)(b)3e and 401 KAR 50:035, Permits, Section 7(3)(j)]

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority.

SECTION G - GENERAL CONDITIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit. [401 KAR 50:035, Permits, Section 7(3)(k)]

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance. [401 KAR 50:035, Permits, Section 7(3)(e)]

8. Except as identified as state-origin requirements in this permit, all terms and conditions contained herein shall be enforceable by the United States Environmental Protection Agency and citizens of the United States.

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6). [401 KAR 50:035, Permits, Section 7(3)(h)]

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance. [401 KAR 50:035, Permits, Section 8(3)(b)]

11. This permit shall not convey property rights or exclusive privileges. [401 KAR 50:035, Permits, Section 7 (3)(g)]

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry. [401 KAR 50:035 , Permits, Section 7(2)(b)5]

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders. [401 KAR 50:035, Permits, Section 8(3)(a)]

15 Permit Shield: Except as provided in State Regulation 401 KAR 50:035, Permits, compliance by the affected facilities listed herein with the conditions of this permit shall be deemed to be compliance with all applicable requirements identified in this permit as of the date of issuance of this permit.

16. All previously issued construction and operating permits are hereby subsumed into this permit.

SECTION G - GENERAL CONDITIONS (CONTINUED)

(b) Permit Expiration and Reapplication Requirements

This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the division. [401 KAR 50:035, Permits, Section 12]

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and for permits that meet the relevant requirements of Regulation 401 KAR 50:035, Section 15, Subsection 1.

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority thirty (30) days in advance of the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

2. Within thirty (30) days following commencement of construction, and within fifteen (15) days following start-up, and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Division for Air Quality's Ashland Regional Office in writing, with a copy to the division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

SECTION G - GENERAL CONDITIONS (CONTINUED)

3. Pursuant to State Regulation 401 KAR 50:035, Permits, Section 13(1), unless construction is commenced on or before 18 months after the date of issue of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or if construction is not completed within eighteen (18) months of the scheduled completion date, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Extensions of the time periods specified herein may be granted by the division upon a satisfactory request showing that an extension is justified.

4. Operation of the affected facilities for which construction is authorized by this permit shall not commence until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055, except as provided in Section I of this permit.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with Regulation 401 KAR 50:055, General compliance requirements.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. An emergency shall constitute an affirmative defense to an action brought for noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or other relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and,
   d. The permittee notified the division as promptly as possible and submitted written notice of the emergency to the division within two working days after the time when emission limitations were exceeded due to the emergency. The notice shall meet the requirements of 401 KAR 50:035, Permits, Section 7(1)(e)2, and include a description of the emergency, steps taken to mitigate emissions, and the corrective actions taken.This requirement does not relieve the source of any other local, state or federal notification requirements.

SECTION G - GENERAL CONDITIONS (CONTINUED)

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement.

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 50:035, Permits, Section 9(3)]

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP Reporting Center
   P.O. Box 3346
   Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information by the division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166.
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

SECTION H - ALTERNATE OPERATING SCENARIOS - NA

SECTION I - COMPLIANCE SCHEDULE - NA